



Project Review

Fonterra Lichfield FM120-97tph Boiler

52MW_{th} Gas Fired Boiler

Client: Fonterra Cooperative Group
Location: Lichfield, North Island of New Zealand
Duration: 15 months Design & Build
Site hours 55,000 man hours with no lost time injuries.

Background

With the expansion of the milk processing plant at Lichfield, Fonterra required process steam for the world's second largest dairy spray dryer. The dryer has a capacity of over 30t/hr of whole milk powder (equivalent to 4.4 million litres/day of milk). RCR Energy's contract scope for this project included a 52MW dual fuel (natural gas & diesel) fired boiler capable of producing 71.5t/hr of saturated steam at 37bar. To ensure that Health and Safety risks were minimised and to reduce the site installation costs, we delivered the boiler pressure parts and main components as a fully assembled module.

The Solution

The contract scope for this project included design and build of a Babcock & Wilcox (B&W) FM® package boiler that can produce 71.5t/hr (52MW) of saturated steam:

- Boiler house and MCC room buildings;
- High efficiency heat recovery system utilizing a high efficiency economiser and feed water cooler;
- Feedwater deaerator and pumping system;
- Steam, water and condensate piping systems;
- Electrical instrumentation and control (EI&C) systems;
- High turndown Zeeco dual fuel burner with BMS
- FD fan with motor drive, VSD and silencer
- Chemical dosing station
- On line water quality testing
- Fire protection with separate pre-action
- Civil design and foundations
- Installation, commissioning and training





Why Windsor Energy?

As a proven provider of plant and services in New Zealand & Australia, Windsor Energy offered the following advantages

- Proven track record in the dairy industry and with other large industrial clients.
- Established network of local and international partnerships proven to deliver safe and reliable boiler plant on time.
- Modular plant design optimised for transport and smooth, safe erection.
- Innovative plant design for high efficiency and simple operation.
- Clean burning combustion technology with very low particulate emissions.

Project Name	Fonterra Lichfield Boiler
Project Number	2342
Date Installed	2016
Boiler Type	B & W FM® Boiler
Combustion System	Zeeco Dual Fuel Burner
Thermal Capacity	52 MW
Fuel Source	Natural Gas and Diesel
Boiler Design Code	AS 1228
Steam Output	71,500 kg/h
Steam Temperature	248°C (Saturated)
Design Pressure	41.5 Bar G
Operating Pressure	37.0 Bar G
Feedwater Temperature (from Deaerator)	105°C
Turndown	10:1

Contact Us

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